AP Macroeconomics
Test: International Economics

Instructor's Version

Answers: Free-Response Questions

1. Using a certain quantity of resources, workers in the fictitious country of Iguania can produce 4 bottles of penicillin or 12 loaves of bread. Using the same resources, workers in another fictitious country, Chamelia, can produce 6 bottles of penicillin or 8 loaves of bread.

A. Calculate the opportunity cost of producing each good in each country. (3 points)

Answer:
In Iguania, the opportunity cost of producing a bottle of penicillin is 3 loaves of bread and the cost of a loaf of bread is 1/3 of a bottle of penicillin.
In Chamelia, the opportunity cost of producing a bottle of penicillin is 1 1/3 loaves of bread and the opportunity cost of a loaf of bread is 3/4 of a bottle of penicillin.

3 points for a completely correct answer.
2 points if the numbers for one or the other are incorrect, but if the stated costs in each country are reciprocals of each other.
1 point if one of the answers is correct but the other is not a set of reciprocals.
No points otherwise.

B. Which country has comparative advantage in the production of which good? (3 points)

Answer:
Chamelia has a comparative advantage in the production of penicillin.
Iguania has a comparative advantage in the production of bread.

3 points for the correct answer or for an answer that's consistent with the answers given in part A.
No points for an answer that's incorrect and inconsistent with the answer in part A

C. Complaints about "unfair trade practices" lead to a mutual embargo between these two countries. Who will gain and who will suffer because of this embargo? (3 points)

Answer:
The winners will be bread producers in Chamelia and penicillin producers in Iguania.
The losers will be bread consumers in Chamelia and penicillin consumers in Iguania.

Full credit for including the stated groups in the correct categories. It doesn't really matter if other groups (bread producers and consumers in Iguania and penicillin producers and consumers in Chamelia) are mentioned.
Students lose 1 point for each of the four stated groups they fail to include in the correct category.

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D. If, after a long embargo, trade is resumed between these two countries, who would benefit the most from it? (3 points)

Answer:
This is the reverse of the previous question.
The winners will be bread consumers in Chamelia and penicillin consumers in Iguania.
The losers will be bread producers in Chamelia and penicillin producers in Iguania.

Full credit for including the stated groups in the correct categories. It doesn't really matter if other groups (bread producers and consumers in Iguania and penicillin producers and consumers in Chamelia) are mentioned.
Students lose 1 point for each of the four stated groups they fail to include in the correct category.

2. Government fiscal policy and international trade seem to be linked. Let's investigate their relationship.

A. Say a government is currently running a budget deficit and decides to cut taxes, increase spending, or both. Explain how this will affect interest rates in the country. (3 points)

Answer:
Either of these actions will increase the size of the government deficit. As a result, the government will have to increase its borrowing. This increase in the demand for credit will lead to higher interest rates.

3 points for this explanation. No partial credit.

B. Given the change in interest rates from part A, what will happen to the value of this country's currency? Explain why. (3 points)

Answer:
If interest rates in a country rise, foreigners with money to lend will be more eager to lend it in that country. To do this, however, they will need to exchange their currency for the currency of the country whose interest rates have risen. This increased demand will increase the value of the currency in the country where interest rates rose.

3 points for this explanation.
No partial credit for an incorrect explanation, even if it is consistent with the answer from part A.

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C. Given the change in the value of the country's currency from part B, how will the price of the country's goods relative to other countries' goods change? What effect will this have on its current account? (3 points)

Answer:
If the country's currency increases in value relative to other countries' currencies, this will make its products relatively more expensive. As a result, it will export less and import more. If it has a current account surplus, this surplus will shrink. If it has a current account deficit, this deficit will increase.

3 points for this explanation.
No partial credit for an incorrect explanation, even if it is consistent with the answer from part A.

D. What effect will all this have on the country's capital account, and how will this work to keep the balance of payments equal to zero? (3 points)

Answer:
As a result of the change in its currency's value, the country will see either a decreasing current account surplus or an increasing current account deficit, meaning that more of its currency will be going to other countries. Because this currency is no good in other countries, it will return in the form of capital purchases, meaning that there will be a resulting capital inflow, which will keep the balance of payments equal to zero. At the same time, the higher interest rates encourage foreigners to invest in the country, and this also causes a capital inflow.

1 point for saying that more currency will be going to other countries.
2 points for saying that this will return in the form of capital inflows.

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3. For a number of years, the U.S. dollar was losing value relative to other currencies around the world.

A. Explain what sort of monetary policy would help to increase the value of the dollar and why it would have this effect. What effects does this policy have on unemployment and the merchandise trade balance? (5 points)

Answer:
A tight, or contractionary, monetary policy would increase the value of the dollar. This might include such actions as increasing the reserve requirement, increasing the discount rate, or selling bonds. This would reduce the supply of dollars, which would increase the price of the dollar in foreign exchange markets directly or increase it indirectly through increased interest rates. The higher interest rates make financial investment in the United States more profitable and lead to increased demand for dollars with which to make such investments. In either case, a tight monetary policy will lead to an increased value for the dollar.
The result of higher interest rates and a stronger dollar will be higher unemployment (due to decreased investment spending by firms).
Also, the trade deficit will increase because the higher interest rates make U.S. products relatively more expensive to the rest of the world, decreasing exports, and makes foreign goods relatively cheaper in the United States, increasing imports.

1 point for mentioning a tight, contractionary monetary policy or for mentioning the actions the Fed could take to affect this type of policy.
2 points for mentioning either mechanism by which a tight monetary policy will lead to an increased value of the dollar.
2 points for accurately describing the effect this will have on unemployment and on the trade balance.

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B. Describe a fiscal policy that would help increase the value of the dollar and why it would have this effect. What effects does this policy have on unemployment and the merchandise trade balance? (5 points)

Answer:
An expansionary fiscal policy (increased spending or decreased taxes) usually creates or adds to an existing deficit. To finance increased spending without increasing taxes, or to cover for decreased taxes, the government is forced to borrow money (or borrow more money). This (increased) borrowing will increase interest rates. Higher interest rates will make U.S. financial markets more attractive to overseas investors, who will demand more dollars to take advantage of higher U.S. interest rates. This increased demand will increase the value of the dollar on international exchange markets. This leads to decreases in the merchandise trade balance (making it more negative, perhaps). This decreases unemployment, however, as the expansionary fiscal policy creates employment and growth.

1 point for mentioning an expansionary monetary policy or for mentioning the actions that support this sort of policy.
2 points for explaining that an expansionary monetary policy will lead to higher interest rates.
2 points for explaining that higher interest rates will lead to higher value of the dollar and lower unemployment.

4. Purchasing power parity and the law of one price are two related concepts.

A. Explain what is meant by the law of one price. Also explain why a person or nation could profit if this law does not hold. (3 points)

Answer:
The law of one price says that goods and services must have approximately the same price in different places, with necessary corrections for exchange rates if prices are expressed in different currencies.

If this did not hold, you could purchase goods where the price is relatively low, transport them to places where the price is relatively high, and then resell them at the higher price.

2 points for the explanation of the law of one price.
1 point for the explanation of arbitrage.

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B. Offer three reasons why the law of one price might not hold for some goods. (3 points)

Answer:
One reason is that there may be trade restrictions (perhaps including tariffs, quotas or embargoes) that prevent the transport of goods or impose high costs on transport.
A second reason is that the good may be costly or impossible to transport, such as land or housing.
A third reason is that different goods may be taxed at different rates in different places, meaning that the after-tax prices can vary significantly.

1 point for each explanation given, even if they are somewhat similar. Be fairly generous here.

C. Explain what is meant by purchasing power parity. Also explain how purchasing power parity relates to the law of one price. (3 points)

Answer:
Purchasing power parity means that one nation's currency should have the same purchasing power when it is converted to another nation's currency.
If the law of one price holds, the price of a good will be the same in either currency when adjusted for the exchange rate.
If the law of one price fails, goods will have different prices in different places and a certain amount of one nation's currency will purchase different amounts of things in different places.

2 points for a description of purchasing power parity.
1 point for the relationship between the two concepts.

5. The imaginary nation of Washingtonia prohibits the import of foreign-made pharmaceuticals. What effect does this have on the well-being of people in Washingtonia who consume pharmaceuticals? Who benefits from this trade restriction? (2 points)

Answer:
This will harm consumers of pharmaceuticals because they may pay higher prices than otherwise.
This will help domestic pharmaceutical companies, who will face less competition and probably charge higher prices and earn greater profits.

1 point for each. No points if they say something about protecting consumers from inferior foreign products.

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